

Attachment 2
to the Affidavit of Wharton B. Rivers

State Service Quality Objectives

	Measure	Regulatory Objective	Internal Measure	Internal Objective
Illinois	% install within 5 days	95.44%	% not installed within 5 days	4.56%
			% installation missed appointments	1.00%
	Trouble reports per 100 lines	2.66	Initial trouble report rates (POTS)	3.00%
	% Out of Svc > 24 hours	5%	% Out of Svc > 24 hours	5%
			Mean time to repair (POTS)	21.00
	% dial tone speed within 3 secs	96.8%		
	Avg speed of ans - toll operator	3.6 secs	Avg speed of ans - toll operator	3.40
	Avg speed of ans - information	5.9 secs	Avg speed of ans - DA	5.60
	Avg speed of ans - intercept	6.2 secs	Avg speed of ans - intercept	5.60
	Annual trunk groups below obj.	4.5 or less		
Indiana				1.00
	Bus Ofc answer within 20 secs	80%	Bus Ofc answer within 20 secs	80%
	% trunks with no blockage	97%		
	Repair answer within 20 secs	80%	Repair answer within 20 secs	80%
	% install within 5 days	90%	% not installed within 5 days	10%
			% installation missed appointments	1.00%
	Avg speed of ans - toll operator	3.3 secs	Avg speed of ans - toll operator	3.10
	Avg speed of ans - information	7.7 secs	Avg speed of ans - DA	5.60
	% of dial tone speed within 3 secs	95.0%		
	Local call completion	95.0%		
Michigan	Trouble reports per 100 lines	10.0	Initial trouble report rates (POTS)	3.0%
	Avg repair speed of answer	25 secs	POTS repair speed of answer	25
	Service order commitments met	90%	% installation missed appointments	1.00%
	Avg repair speed (Hrs:min)	36:00	Mean time to repair (POTS)	21.00
	% repeat trouble reports	Not set	POTS % Repeat Reports	10.0%
	Trouble reports per 100 lines	6.0	Initial trouble report rates (POTS)	3.00%
	Avg speed of ans - information	10.0 secs	Avg speed of ans - DA	6.70
Ohio	Bus Ofc answer within 20 secs	Not set	Bus Ofc answer within 20 secs	80%
	Repair answer within 20 secs	90% (Note 1)	POTS repair speed of answer	90%
	Bus Ofc answer within 20 secs	90% (Note 1)	Bus Ofc answer within 20 secs	80%
	Avg speed of ans - toll operator	7.0 secs (Note 2)	Avg speed of ans - toll operator	6.70
	Avg speed of ans - information	7.0 secs (Note 2)	Avg speed of ans - DA	6.70

Measure		Regulatory Objective	Internal Measure	Internal Objective
	% install within 5 days	90%	% not installed within 5 days	10%
	% install within 90 days	99% (Note 3)	No longer applicable	N/A
	% install appointments met	90% (Note 4)	% installation missed appointments	1.00%
	Regrade service within 90 days	90% (Note 3)	No longer applicable	N/A
	Regrade service within 1 year	99% (Note 3)	No longer applicable	N/A
	Trouble reports per 100 lines	6.0 (Note 5)	Initial trouble report rates (POTS)	3.00%
	% Out of Svc < 24 hours	90% (Note 4)	% Out of Svc > 24 hours	5%
			Mean time to repair (POTS)	21.00
	% dial tone speed within 3 secs	98.0%		
	Inter-office call completion rate	97.0%		
	% repair appointments met	(Note 4)	POTS Repair % missed appointment	5.00%
Wisconsin	Avg installation time (days)	2.85	% not installed within 5 days	10%
			% installation missed appointments	1.00%
	Trouble reports per 100 lines	1.88	Initial trouble report rates (POTS)	3.00%
	Avg time out of service (hrs)	15.64	Mean time to repair (POTS)	21.0 (Note 6)
	% repeat trouble reports	15.59%	POTS % Repeat Reports	10.0%
	Avg repair speed of answer	20 secs	POTS repair speed of answer	92%
	Repair answer within 20 secs	92%	POTS repair speed of answer	92%
	% Out of Svc < 24 hours	95%	% Out of Svc > 24 hours	5%
	Avg speed of ans - toll operator	2.7 secs	Avg speed of ans - toll operator	2.60
	Avg speed of ans - information	6.3 secs	Avg speed of ans - DA	6.10

Notes:

- 1 Objective was modified to 60 second average by new Minimum Telephone Service Standards (MTSS rules effective July 1997)
- 2 Objective was modified to 20 second average by new MTSS rules
- 3 Measure no longer required under new MTSS rules
- 4 Objective is 100% under new MTSS rules (unless customer is notified). Misses result in customer credits
- 5 Objective was modified to 3.0 by new MTSS rules
- 6 Includes service affecting and out-of-service

Attachment 3
to the Affidavit of Wharton B. Rivers

State Service Quality Results
1995 - 1Q98

	Measure	Objective	1995	1996	1997	3 Months YTD 1998
Illinois	% install within 5 days	95.44%	99.2%	96.4%	97.7%	97.6%
	Trouble reports per 100 lines	2.66	2.33	2.51	2.04	1.81
	% Out of Service >24 hours	5%	14.2%	13.5%	13.1%	20.5%
	% dial tone speed within 3 secs	96.8%	99.8%	99.98%	99.9%	99.7%
	avg speed of answer - toll operator (secs)	3.6 secs	2.9	3.0	2.86	2.85
	avg speed of answer - information (secs)	5.9 secs	3.5	4.9	4.94	4.82
	avg speed of answer - intercept (secs)	6.2 secs	6.1	3.2	3.71	1.49
	Annual trunk groups below objective	4.5 or less	3.0	1.0	0.0	1.0
Indiana	Bus office answer within 20 seconds (%)	80%	50.9	61.1	54.0	46.0
	% trunks with no blockage	97%	98.8	98.0	98.4	97.2
	Repair answer within 20 secs (%)	80%	73.6	86.5	84.4	82.7
	% install within 5 days	90%	92.8	93.1	97.3	98.6
	avg speed of answer - toll operator (secs)	3.3 secs	2.1	2.9	2.9	2.7
	avg speed of answer - information (secs)	7.7 secs	3.8	4.8	4.9	5.0
	% dial tone speed within 3 secs	95.0%	100	99.8	99.9	99.4
	local call completion (%)	95.0%	99.8	99.8	99.9	99.9
Michigan	Trouble reports per 100 lines	10.0	1.9	3.1	2.4	1.8
	Avg repair speed of answer	25 secs		17 secs	17	17
	Service order commitments met (%)	90%		96.1%	96.4	93.4
	Avg repair speed (Hrs:min)	36:00		28:56	29:14	34:51
	% repeat trouble reports	not set		16.8	16.0	16.0
	Trouble reports per 100 lines	6.0		2.5	2.02	1.76
	avg speed of answer - information (secs)	10.0		5.0	5.84	5.49
	Bus office answer within 20 seconds (%)	not set		66.8%	53.5	45.7

Michigan Note: No 1995 data shown. New service quality standards were established in July 1996.

	Measure	Objective	1995	1996	1997	3 Months YTD 1998
Ohio	Repair answer within 20 sec (%)	90% (Note 1)	86.1	92.1	92.7	27.62
	Bus ofc answer within 20 sec (%)	90%	84.1	91.6	92.6	67.45
	Avg speed of ans - toll operator (secs)	7.0 secs (Note 2)	4.0	4.6	5.9	6.18
	Avg speed of ans - information (secs)	7.0 secs	5.3	5.0	5.4	5.39
	% install within 5 days	90%	97.1	99.0	97.8	90.8
	% install within 90 days	99% (Note 3)	100.0	100.0	n/a	n/a
	% install appointments met	90% (Note 4)	94.1	95.2	96.6	n/a
	Regrade service within 90 days (%)	90% (Note 3)	100.0	100.0	n/a	n/a
	Regrade service within 1 year (%)	99% (Note 3)	100.0	100.0	n/a	n/a
	Trouble reports per 100 lines	6.0	2.4	2.2	1.87	1.74
	% out of svc <24 hours	90% (Note 4)	88.5	93.0	92.8	83.5
	% dial tone speed within 3 secs	98.0%	99.1	99.2	n/a	n/a
	Inter-office call completion rate (%)	97.0%	100.0	100.0	n/a	n/a
	% repair appointments met	(Note 4)			95.5 %	94.9
Wisconsin	Avg installation time (days)	2.85		2.3	2.18	2.29
	Trouble reports per 100 lines	1.9		1.45	1.45	1.24
	Avg time out of svc (hrs)	14.99		19.9	22.71	21.14
	% repeat trouble reports	14.93		13.6	13.6	12.5
	Avg repair speed of answer (secs)	20 secs		7	7	8
	Repair answer within 20 secs (%)	92%		95.1	94.5	93.4
	% out of service > 24 hours	95%		81.4	77.7	77.5
	avg speed of answer - toll operator (secs)	2.7 secs		2.2	2.14	2.16
	avg seed of answer - information (secs)	6.3 secs		5.0	5.02	4.88

Ohio Notes:

Objective was modified to 60 second average by new Minimum Telephone Service Standards (MTSS) rules effective July 1997.

Objective was modified to 20 second average by new MTSS rules

Measure no longer required under new MTSS rules

Objective is 100% under new MTSS rules (unless customer is notified). Misses result in customer credits.

Pursuant to 47 C.F.R. §§ 1.743(c), 1.913(c), 5.54(c), the preceding document is a copy of the original signed affidavit, which was filed as an attachment to Exhibit 2 to the Form 490 applying for the Commission's consent to transfer control of Part 22 licenses held by Detroit SMSA Limited Partnership from Ameritech Corporation to SBC Communications Inc. That Form 490 was filed concurrently with this application.

Affidavit of Richard J. Gilbert and Robert G. Harris

on behalf of SBC Communications

STATE OF CALIFORNIA)
) SS
COUNTY OF ALAMEDA)

I, Richard J. Gilbert, being duly sworn, depose and say:

I am Professor of Economics and Adjunct Professor of Business Administration at the University of California at Berkeley and a Principal at LECG, Inc., an international economics and strategic business consulting firm. My research specialty is in the field of industrial organization and regulation. From 1993 until 1995, I was the Deputy Assistant Attorney General for Economics in the Antitrust Division of the U. S. Department of Justice, the highest-ranking economics position in the Antitrust Division. In this capacity, I was involved in the Department's competitive analysis of the AT&T/McCaw merger, British Telecom's proposed equity investment in MCI, Deutsche Telekom's and France Telecom's proposed equity investment in Sprint, and other matters involving competition in the telecommunications industry. More recently, I have been invited to testify before the Federal Trade Commission on antitrust policy in high technology and other markets.

I have been an Associate Editor of *The Journal of Economic Theory*, *The Journal of Industrial Economics*, and *The Review of Industrial Organization*. From 1994 to 1995, I was President of the Industrial Organization Society. From 1994 until May 1996, I was vice-chair of the American Bar Association's antitrust section committee on economics. I have published and lectured widely on industrial organization theory and policy and I have

testified before U.S. courts of law, regulatory commissions, and Congress on economic policy issues. I received Bachelors and Masters degrees in Electrical Engineering from Cornell University in 1966 and 1967, respectively. I received a Masters degree in Economics from Stanford University in 1975, and a Ph.D. in Engineering-Economic Systems from Stanford University in 1976.

I, Robert G. Harris, being duly sworn, depose and say:

I am a Principal at LECG, Inc. and Professor Emeritus of Business and Public Policy in the Haas School of Business, University of California at Berkeley. I earned Bachelor of Arts and Master of Arts degrees in Social Science from Michigan State University and Master of Arts and Doctor of Philosophy degrees in Economics from the University of California at Berkeley. My academic research has analyzed the effects of economic regulation and antitrust policy on industry performance, and the implication of changing economics and technology for public policies in transportation and telecommunications. Early in my career, I published extensively on competition, vertical relations and regulatory policies in the rail freight industry. More recently, I have published research on the reform of Japanese telecommunications policy; the strategic character of telecommunications services and its implications for public policies; the effects of regulation and the AT&T divestiture on technological innovation in telecommunications; the deployment and adoption of Integrated Services Digital Network; the development of competition in local access and exchange services; and the development of interconnection policies.

As an advisor to the U. S. Department of Transportation from 1976-79, I assisted in the drafting of legislation that was passed by Congress in 1980, reforming regulation of the motor carrier and railroad industries. While on leave from the University of California in 1980-81, I served as a Deputy Director for Cost, Economic and Financial

Analysis at the Interstate Commerce Commission. At the I.C.C., I was centrally involved in the major rule makings implementing the motor carrier and railroad regulatory reform acts of 1980 and directed the development of the Uniform Rail Costing System. I have also served as a consultant to the U.S. General Accounting Office, the U.S. Office of Technology Assessment, the U.S. Department of Justice, the California Attorney General and the California Department of Consumer Affairs. I have advised the Economic Planning Agency of Japan on the reform of Japanese telecommunications policies.

I have testified on telephone rate design, costing and pricing principles, competition policy and alternative regulation before the Federal Communications Commission and before the state commissions of 25 states plus the District of Columbia. I have testified before the United States Senate, the United States House of Representatives and the Joint Economic Committee of Congress on transportation, antitrust and telecommunications policy issues.

We have been asked by SBC Communications Inc. ("SBC") to evaluate the economic benefits of the proposed merger of SBC and Ameritech. Our analysis considers the impact of the merger for consumers in the rapidly changing telecommunications marketplace and summarizes the efficiencies that can be expected from the merger. We conclude that the merger is likely to provide substantial consumer benefits in the form of enhanced service alternatives, more rapid introduction of new services, and lower quality-adjusted prices.

The attached report contains the results of our analysis and the bases for our conclusions.

Richard J. Gilbert

Richard J. Gilbert

Robert G. Harris

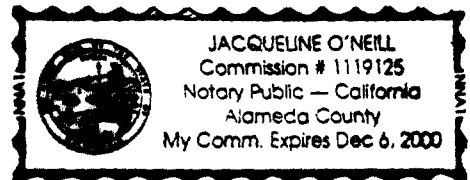
Robert G. Harris

Subscribed and sworn to before me

this day of July 21, 1998

Jacqueline O'Neill

Notary Public



REPORT OF
RICHARD J. GILBERT
AND
ROBERT G. HARRIS

July 21, 1998

Economic Benefits of the SBC-Ameritech Merger

I. Introduction

1. The purpose of this affidavit is to address the consumer impacts of the proposed SBC-Ameritech merger. Consumers benefit from new products and services and lower quality-adjusted prices than would occur without the merger. The merger presents significant opportunities to speed the development and introduction of new services and to reduce costs while improving service quality.
2. Section II summarizes the changes that are taking place in the local, national and global telecommunications industry and discusses how the merger fits in this dynamic marketplace. The telecommunications world of today is markedly different from that which existed in the past, and continues to change rapidly. The benefits that consumers receive from firms in the telecommunications marketplace will only come to pass if the firms who participate in the market are allowed to configure and transform themselves into entities that will succeed in this revolutionary period.
3. Section III describes the consumer benefits from the merger. The merger will enhance consumer welfare by accelerating the introduction of new services, increasing the utilization of existing services, and promoting competition in the supply of integrated services. SBC estimates the total cost savings from the merger to be around \$2.5 billion,¹ of which \$778 million is the result of increased utilization of existing products.² In addition to the increased consumer benefits from existing products, the merger will also allow the companies to develop and roll out new

¹ Kaplan Affidavit ¶ 2.

² Kaplan Affidavit ¶ 7.

technologies faster through sharing of research efforts, knowledge, and test markets, and because the merged company will have a larger base over which to spread costly and risky development and product introductions.

4. Section IV evaluates the efficiency estimates for the merger taking into account the results achieved in SBC's merger with Pacific Telesis. Experience shows that SBC's *ex-ante* estimates of the benefits of its merger with Pacific Telesis were on target. The benefits that can be expected from the SBC-Ameritech merger, supported by the results that have been achieved in the SBC-Pacific Telesis merger, lead to the overall conclusion that the merger of SBC and Ameritech is clearly in the public interest. The merger creates large efficiency gains and will have no anticompetitive effects. Indeed, the merger will enhance competition in those markets targeted by the merged company's national/local business plan and will likely stimulate new competition in integrated services to the benefit of consumers in the present SBC and Ameritech service areas.

II. The Merger Is Responsive to the Changing Dynamics of the Telecommunications Marketplace

5. The merger of SBC and Ameritech is an organizational response to the rapidly changing dynamics of the telecommunications industry. Chairman Kennard recently told a group of telecommunications investors and analysts: "the telecom industry is not just about to enter a revolution. It's in one."³ Technological change is affecting SBC and Ameritech in three critical respects:

- a) Consumers' growing appetite for voice, data, and video applications is influencing the

³ William E. Kennard, Chairman, FCC, Remarks to Legg Mason "Telecom Investment Precursors" Workshop, as prepared for delivery, Washington, DC, March 12, 1998.

competitive landscape by placing a premium on technologies that provide large amounts of bandwidth.

- b) Consumers are also eager for packages that integrate voice, data, Internet, and other services, making it advantageous for business arrangements that can provide service packages at low cost.
- c) The rapid change in wireline, wireless, and cable-based telecommunications technologies means that companies such as SBC and Ameritech must maintain a broad portfolio of technological assets to ensure their ability to remain competitive as the telecommunications industry continues to evolve.

6. The simple fact is SBC and Ameritech no longer enjoy the certainty of being a regulated, franchised supplier of access and switching services for voice telephony. As discussed below, traditional voice telephony occupies a shrinking share of the total demand for communications services. Business and residential consumers have an increasing demand for data, and the distinction between voice telephony and data is becoming blurred.⁴ Multi-location business

⁴ For example, "Bell Atlantic will begin building a long distance data network next month to tap the multibillion-dollar market for high speed services within its East Coast region...Bell Atlantic said it hopes the packet-switched network will generate \$3 billion a year in revenue by 2003 through high speed services such as Internet access, data transport and video conferencing... [The network] will incorporate asynchronous transfer mode (ATM), synchronous optical network (SONET) and wave division multiplexing (WDM) technologies." From "Bell Atlantic to Build Long Distance Data Network," Telecom A.M., June 9, 1998. Also, a study by SRI consulting finds that "business fax transmissions, voicemail messages and pages - - not real-time voice conversations - will drive most of the growth in the use of internet telephony in the next five years." From "IP Telephony to Capture Five Percent of LD Traffic by 2002, Study Says," Telecom A.M., April 16, 1998. Furthermore, Alan Cane of the Financial Times, asserted that, "...high bandwidth, or broadband, systems are necessary to transmit multimedia: the moving video images, high fidelity sound and top-quality graphics that will characterize tomorrow's communications... When you say multimedia, are you talking about Internet and such like? The transmission of data - Internet traffic is one example - is growing fast and should exceed the volume of voice traffic early next century." From "Telecom A.M. Guide: The New Telephony," Telecom A.M., October 7, 1997.

customers in particular have a demand for a bundle of local, long distance and data services from a single supplier to simplify billing and obtain economies of “one-stop shopping.”⁵ These customers are a key marketing target for the merged SBC-Ameritech national/local business plan.

7. Firms that can provide telecommunication services, including data services, cheaper and more effectively will take market share from the landline local exchange carriers. Firms that can provide integrated packages of data , voice and other services will be especially effective competitors in the telecommunications industry of the future.

8. These changes in technology and demand make it crucial that public policy makers consider the dynamics of the telecommunications marketplace when evaluating the SBC-Ameritech merger. The merger in no way gives the combined SBC-Ameritech leverage to delay these emerging technologies. Instead, the combined company provides a better organizational platform to develop and introduce new technologies and services that respond to consumer demands. A primary benefit of the merger is the ability to develop and roll out competing technologies and services faster than would be possible for the companies individually.

9. The public interest benefits of the merger necessarily must consider the likely economic consequences to the merger parties and their customers if they fail to complete the intended transaction. The experience of industries that are in the process of de-regulation, or have already witnessed de-regulation, is that market forces disregard the geographic and product boundaries that have been imposed by regulators. Competition from suppliers in related industries or from the same industry in different geographic locations tend to unravel the structure of service tariffs designed by the regulators. Competitors target and win the more profitable customers, which in the case of telecommunications are the high volume users that account for a very large share of total revenues. Firms that remain under the “protection” of regulation face a dwindling customer base which is

⁵ “On the Value of Being Integrated,” Yankee Group, July 1997.

increasingly expensive to serve. The consequence of the erosion of market share is an eventual need to re-structure regulated rates to recover the increasing per-capita revenue requirements of the remaining customers.

10. The merger of SBC and Ameritech can mitigate the adverse effects of increasing competition on formerly captive customers, such as residential and small business consumers, by making the merged company better able to compete for market share. These customers can benefit from this enhanced competition for two reasons. First, by retaining profitable customers, the merged company retains a source of earnings that contributes to the fixed costs of serving all customers. Second, the competition for customers will take place with new and improved technologies that will produce benefits for all customers in the form of enhanced choices and lower costs.

11. Technological change is dramatically altering the competitive landscape in the telecommunications industry. Significant technological developments in radio communications, including microwave, satellite, terrestrial broadcast radio and television and cellular telephone, have dramatically lowered the cost, improved the quality and proliferated a wide range of wireless communications services. It is also increasingly clear that the coaxial wireline cable TV network will be upgraded technologically to provide point-to-point telecommunications services. Competition for incumbent telephone companies coming from new data services is rapidly expanding as they provide head-to-head competition with SBC and Ameritech's existing telecommunications services. Voice service delivered over the public switched network is facing increasing competition from data services, such as faxes and e-mails. The number of e-mails sent per day, for example, is growing at 55 percent annually and at that rate would reach 5 billion messages per day by the year 2005 in the U.S. alone.⁶ Moreover, many data services, such as faxes

⁶ "Telecom Restructured," *Forrester Research*, September 1997, p. 5. Also, George Gilder predicts that if growth in Internet usage continues at current rates, voice services will fall to less

and e-mails, are rapidly moving off the public switched network and onto the Internet and wireless networks.⁷ Dataquest predicts that the number of fax pages sent over the Internet rather than the public network will increase over one hundred fold from 44 million in 1997 to 5.6 billion in just three years.⁸

12. Data communications services are the fastest growing services in telecommunications, and none of this traffic is reflected in the standard measures of competition based on access lines. For example, Forrester research estimates that, by 2004, Internet telephony will divert \$3 billion of normal telco traffic.⁹ While these services are not perfect substitutes for voice services, it is clear that the degree of substitutability is increasing over time. According to a report by the International Engineering Consortium, traditional wireline voice service, which today generates more than 80 percent of total RBOC and IXC revenue, will amount to less than 50 percent by 2010.¹⁰

13. Not only are consumers using the Internet to send e-mail and files rather than dialing up their colleagues and sending faxes, but now the Internet can handle voice traffic (albeit voice broken into packets). With cheap transport, cost-effective packet-switches, and metro area SONET fiber rings, CLECs are bypassing much of the local exchange network. Commenting on the Sprint announcement of ION (a new broadband local telecommunications offering currently in

than 1 percent of telecom traffic by 2004. See "The Fiber Baron," *The Wall Street Journal*, October 6, 1997, p. A22.

⁷ E-mail and Internet faxes not only substitute for the local provider's retail services, in terms of intraLATA toll traffic, they also result in a loss of wholesale revenue through reduced switched access traffic.

⁸ "Dataquest Says Internet Faxing is on the Way to Provide Low-Cost Alternatives to Traditional Faxing," *Dataquest Press Release*, November 10, 1997.
<<<http://gartner3.gartner.com/dq/static/about/press/pr-b9757.html>>>.

⁹ "Telecom Restructured," *Forrester Research*, September 1997.

¹⁰ Robert M. Janowiak, Massoud Saghafi, and Jagdish N. Sheth, "Communications Outlook: Competition, Growth, and Consolidation," *Annual Review of Communications, International Engineering Consortium*, Volume 50, 1997.

development), Wall Street Journal analysts summarized the BOCs' situation in these terms:

"With data rapidly overtaking voice calls as the primary traffic on phone networks world-wide, the big phone companies need to retool their systems, lest rivals such as Sprint, IXC and even tiny Frontier Corp. move in quickly and lure away their high-spending business and residential customers. The newcomers can provide a full suite of voice and data services to business customers simply by leasing a pipeline from local carriers, relegating the Bells to the role of a wholesaler of dumb wires."¹¹

14. Americans' increasing appetite for bandwidth is substantially impacting local competition by reshaping many competitors' strategies and destroying old paradigms such as local service. The most sought after access to the customers' premises may not be the two wire copper loop but the next generation "access" technology or the protocol that will "soup up" the loop.

15. An important point to note with respect to many of these new technologies is that they do not require access via the local loop provided by the incumbent LEC. For instance, Internet access is available both via fixed wireless facilities and cable modems. VSAT provides another important and evolving technology that bypasses LEC local loops. VSAT networks compete directly with Ameritech, SBC and other exchange carriers by using satellite links in place of local loops. VSAT technology also offers higher reliability and increased adaptability by allowing a gradual increase in bandwidth without having to replace equipment.¹²

16. Besides VSAT technology, satellites are playing a very large role in other competitive aspects of telecommunications. Many of the world's largest firms are investing heavily in satellites for providing access. With their large geographic coverage, satellites offer the possibility of new and improved services such as global phone service, video, data broadcasting, and direct-to-car

¹¹ Stephanie N. Mehta and John J. Keller, "Sprint Plans to Integrate Voice, Data," Wall Street Journal, June 3, 1998, p. A3.

¹² Robin Gareiss, "Satellite Services: Down to Earth and Ready for Business," *Data Communications Magazine*, see <<<http://www.data.com/roundups/earth.html>>>, December, 1997, p. 4; Simon Bull, "Asia-Pacific VSAT Who Owns the Sky?," *Data Communications Magazine*, see <<http://www.data.com/global_networks/sky.html>>, March, 1997, p. 2.

audio services.

17. A significant change growing out of the availability of many new technologies is the shift from modal to intermodal competition. Where technologies were once designed for a specific purpose (e.g. cable for television, wireless for mobile services), these technologies are now jumping across multiple applications. Cable modems are used for data traffic and wireless services supplement local wireline telephone services.

18. A variety of technologies are being used to either supply services traditionally offered by local telephone companies or to supply advanced services such as high speed data. Among these alternatives are PBX systems used by large customers or for virtual private networks from firms such as AT&T, MCI, or Sprint.

19. Yet another aspect of this technological revolution is fixed wireless. Fixed wireless applications are competing directly with services traditionally provided over the ILEC network such as access, high speed access, and call handling capabilities. The advantage of fixed wireless is cost-effective high bandwidth. In a proceeding on LEC provision of CMRS services, the Commission noted that "fixed wireless technology has developed to the point where it has the potential to provide a competitive alternative to the incumbent LEC network" and that "[i]n the wake of the development of fixed wireless services, incumbent LECs and CMRS operators are increasingly likely to be direct competitors, and wireless carriers can no longer appropriately be regarded as merely providers of adjunct services."¹³

20. It has long been recognized that cable holds a tremendous potential in offering direct competition to local telecommunications providers. That potential is now being reinvigorated. Whereas the cable companies' digital dreams of interactive video and voice in the early 1990s were

¹³ Report and Order, In the Matter of Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services, FCC WT Docket No. 96-162, rel. October 3, 1997, ¶ 54.

largely unrealized, they have found new life in the Internet era and the demand for high speed access. The nation's largest cable companies have started Internet access service via cable modems. Buoyed by the success of cable modems and the interest of Silicon Valley, the cable industry has also revived the strategy of converging entertainment and communications around TVs hooked into a cable connection with a small set-top box.

21. The merger of Ameritech and SBC must be viewed in the complex and evolving marketplace with its many players and technologies. It is insufficient to confine an analysis to "direct" sources of competition, examining only how many entrants are competing for local exchange service using their own facilities, unbundled network elements (UNEs), or resale. The competition from alternative services underscores the need for SBC and Ameritech to properly position themselves in the telecommunication industry. These alternative modes of communication services are increasingly becoming direct sources of competition as technology advances and consumer tastes evolve. Excluding these sources from an analysis of the merger leads to an underestimation of current competition and ignores highly significant market trends that are key strategic drivers for the transaction.

22. No one, of course, can know with certainty the contours of the telecommunications industry of the 21st century. Major telecommunications firms have been responding to these uncertainties in different ways. Many of the largest IXC's have been adding new services to their offerings by pursuing a strategy of acquisition. WorldCom, for example, has entered local exchange markets and has become the largest provider of Internet services by acquiring MFS, Brooks Fiber, UUNet, and if the merger is approved, MCI, to gain a total of 129 local networks across the country.¹⁴ AT&T, similarly, has acquired TCG, the largest CLEC in the U.S., and has announced plans to acquire TCI, the second largest U.S. cable provider.

¹⁴ *Inside the Competitive Local Exchange*, Third Edition, Telecom Publishing Group, 1997, pp. 93-97. See also, <<<http://www.brooks-fiber.com>>> and <<<http://www.mci.com>>>.

23. Other entrants are positioning themselves to serve customers through strategic alliances and partnerships in order to expand into new product and geographic markets. Several IXC's, including AT&T and MCI, have expanded into local markets by forming alliances with CLECs already operating in these markets. For example, MCI has signed preferred provider agreements with three CLECs covering 79 markets whereby MCI uses the networks of these CLECs to offer local service to customers, bypassing the networks of the incumbent LEC.¹⁵ AT&T has signed several similar agreements for the same purpose. Electric utilities are also entering new markets by leveraging their existing fiber assets into telecommunications through partnerships with CLECs and other telecommunications providers. ICG, for example, has partnered with several electric utilities throughout the country, gaining it access to over 2,000 miles of fiber, including 1,200 miles leased from Southern California Edison.¹⁶

24. Still other entrants are pursuing resale strategies to enter new markets and offer one-stop shopping. MCI, for example, has added paging to its offerings by purchasing wholesale services from PageNet and SkyTel, and has a resale agreement with Nextwave to purchase at least 10 billion minutes of PCS capacity over the next ten years.¹⁷ Of course, many entrants are entering local

¹⁵ The agreement with Brooks accounts for 37 of the markets, ACSI accounts for 21, and Hyperion for 21. See "Brooks Expands Preferred Provider Agreement with MCI," Brooks Press Release, July 10, 1997. See also, "MCI Selects ACSI As Preferred Provider in 21 Markets," *Telecom A.M.*, Telecom Publishing Group, Vol. 3, No. 20, January 31, 1997. Also, "Hyperion Named as MCI Preferred Provider of Dedicated Access Circuits," Adelphia Press Release, July 9, 1997.

¹⁶ "ICG Communications Announces Fiber Network Project in Atlanta," *ICG Press Release*, June 11, 1997; "ICG Telecom Group Enters Agreement To Lease 105-Mile Fiber Network From The L.A. Department of Water," *ICG Press Release*, September 25, 1996; "ICG Communications, Inc. And American Electric Power Enter Agreement To Add 45-Mile Fiber Optic Network In Columbus Metropolitan Area Plus 138-Mile Link To Canton," *ICG Press Release*, August 6, 1996; "IntelCom Group announces agreement with Southern California Edison to lease in excess of 1,200 fiber-optic route miles, a three-fold expansion of network," *ICG Press Release*, March 27, 1996; "Landmark Venture Joins Major Utility With Competitive Phone Carrier," *ICG Press Release*, January 14, 1997.

¹⁷ John Zahurancik and Elliot Hamilton, "Trends in World Paging and U.S. Paging," *MTA-EMCI Review*, 1996 as seen in *StrataViews* at <<<http://www.strategisgroup.com>>>. "MCI Enters

exchange markets around the country by offering resold services of incumbent local exchange carriers. USN Communications is packaging a comprehensive product offering through resale agreements with various facilities-based telecommunications providers.

25. As these examples illustrate, telecommunications firms are pursuing a wide range of strategies to prepare for the uncertain future of the industry. Some firms are integrating by acquiring firms that supply complementary products or similar products in different geographic markets. This strategy exploits economies of scope and scale in production and allows these firms to supply products that better satisfy consumer demands. The restructuring and redefining of the market, characterized by a constantly changing cast of niche players, mom and pop outfits, small entrepreneurial firms, and large fully integrated ones, is in response to the regulatory, technological, and market changes that have been taking place since divestiture and before.

26. The global telecommunications market and its occupants are undergoing profound change. "I think you're beginning to see a lot of positioning, getting ready for the new world order in telecommunications," said Dave Otto, a telecommunications industry analyst at Edward Jones, in St. Louis.¹⁸ Similarly, François Fillon, France's telecommunications minister, expects that many national markets will give way to one worldwide market. "The world telecom market will be organized around three or four or five big global operators," Fillon said.¹⁹ Firms like AT&T, the United Kingdom's BT and Japan's NTT are all attempting to compete by increasing and maintaining a large scale. The merger of SBC and Ameritech will create a company with the resources and technological assets to compete with these industry giants. In the dynamic and increasingly competitive environment that characterizes the evolving telecommunications marketplace, the merged SBC-Ameritech will be under intense pressure to offer consumers

Wireless Agreement With Nextwave," at <<<http://www.qualcomm.com>>>, August 26, 1996.

¹⁸ InfoWorld, July 21, 1997, Telcos go after international market.

¹⁹ infoWorld, 1/13/97.

attractive quality-adjusted prices to retain and win customers and to re-invest productivity gains from the merger to remain competitive.

III. Consumer Benefits from the SBC-Ameritech Merger

27. The merger of SBC and Ameritech will benefit consumers in five respects:

- a) By combining the resources of SBC and Ameritech, the merger will enhance investment opportunities and speed the introduction of new services and technologies.
- b) The merger will facilitate diffusion of best practices between SBC and Ameritech, thereby lowering costs and facilitating the deployment of new services.
- c) The merger will make possible other cost reductions by exploiting economies of scale and scope and by enabling purchasing economies.
- d) Consumers will benefit from market responses to the announced national/local business strategy of the merged firm.
- e) The merger will reduce the risk that ratepayers will be left responsible for the stranded assets of a company that is not competitive in the global telecommunications market.

28. The merger will generate the consumer benefits listed above in three different ways. The first is from improvements in the internal operations of the merged firm, which result in faster deployment of existing services, new services that are introduced more rapidly as a result of more effective research and development, and lower production costs that are passed on to consumers in competitive telecommunications markets. The second general source of consumer benefits is from market responses to the merged firm's operations. Entry into out-of-region markets, a key element of the merger's business plan, likely will cause other telecommunications firms to enter the merged firm's territory with their own integrated services. This competition will bring lower prices and

more choices to consumers. Finally, by making the combined firm a more effective competitor, the merger will mitigate losses of profitable customers to rival telecommunications suppliers, and thereby reduce the risk of stranded assets. We have addressed in Section II the impacts of the merger on market participants and on the ability of the merged firm to retain customers in the new telecommunications industry. This section focuses on the likely effects of the merger on the internal operations of the merged firm. Although efficiency gains cannot be predicted with certainty, the estimates summarized in this section were prepared with due diligence and with the benefit of experience from the SBC-Pacific Telesis merger.

A. Accelerate the Delivery of New Services

29. The merger of SBC and Ameritech will benefit consumers by facilitating the development and introduction of new services and packages of services. The merged company will be able to develop and introduce these new services and packages of services at lower cost and more rapidly than SBC and Ameritech could achieve without the merger. Consumers will benefit directly from these new service offerings.

30. The conclusion that consumers will benefit from the merger of SBC and Ameritech is supported by economic theory and by the experience of the merger of SBC and Pacific Telesis. Research and development has the characteristic of a public good, which means that, as a matter of economic theory, the results of an R&D program can be applied to almost any scale of operations without diluting its value. Thus, R&D performed by SBC can be used to benefit the operations of the merged company, as can R&D performed by Ameritech. Redundant R&D expenditures can be avoided and the remaining R&D delivers more “bang for the buck” because it benefits the total operations of the merged company. Similarly, the merger reduces the cost of research and development by permitting R&D expenditures to be amortized over a larger customer base.

31. A merger would raise economic concerns about effects on research and development only if the merger would substantially concentrate markets in which the parties are actual or potential

competitors. SBC and Ameritech presently do not compete in the provision of wireline services. We understand that SBC and Ameritech may be required to sell any overlapping cellular systems as part of the completion of the merger. Thus there is no risk that the merger would result in higher concentration in markets for existing wireline or wireless access or exchange services. For most other telecommunications services, such as Internet access, competition exists from a wide range of sources. These include, as discussed in Section II above, various forms of wireless technologies including satellite and microwave systems, and cable-based systems. These services can be provided by a large number of actual and potential competitors, ranging from small, specialized providers of dedicated access services to large IXCs that can provide a full range of access and switching services. Given the diversity of competition that can exist for these services, there is no reason to believe that the merger of SBC and Ameritech could have any adverse consequences for the rate of investment in research and development for new telecommunications services.

32. The benefits of the merger for research and development are not merely theoretical. The experience of the SBC merger with Pacific Telesis demonstrates that these economies are real. SBC and PacTel represented that their merger would deliver substantial efficiency gains as the merged company could exploit the knowledge base of each of the merger parties to improve the quality of existing services, introduce new services, and raise productivity. Experience since the merger indicates that these representations were accurate estimates of the merger benefits.

33. The merger will accelerate the introduction of new products and services to consumers by exploiting complementary research and testing activities and by allowing the merged firm to spread the risks and costs of R&D and product introduction over a larger customer base. In addition to the cost savings from the combination of R&D, there are synergies to be obtained by having experienced and talented researchers exchanging new ideas and approaches to technological problems. The combination of research talent allows the organization to tap the collective expertise and experience of the two companies, and thus encourages the development and adoption of new technologies. Furthermore, the larger market area enhances market experimentation and new